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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,227	05/29/2001	Thomas Z. Fu	IP 6037	5926

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EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/867,227

Applicant(s)

FU ET AL.

Examiner

Tamra L. Dicus

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1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-19,21-24,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-19,21-24,34 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The RCE is acknowledged.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-19, 21-24 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,605,750 to Romano in view of USPN 6,379,780 to Laney et al.

Romano teaches a microporous ink receiving media comprising a microporous polymeric sheet/film that may be stretched at col. 12, lines 8-24 (claim 34) where a microparticle coating is applied on one side of the film (claims 15 and 34). See col. 2, lines 20-24, col. 3, line 24, col. 5, lines 6-35, and col. 18, lines 55-68. The microporous material coating comprises a crosslinked polymethyl methacrylate (PMMA, col. 8, line 55) and colloidal inorganic silica or alumina and submicroscopic particles (col. 6, lines 54-68, col. 7, lines 45-48, lines 65-col. 8, line 5) (meeting instant claims 15-17's colloidal inorganic particles, claim 34's limitation of a submicron particle, and the coating composition of claim 35). See col. 13, lines 29-45. Romano teaches it is also known to add polyurethane (PU) at col. 3, line 41, (claim 18) and polyvinyl alcohol as a binder at col. 14, lines 34-36 (claim 19). The binder is added in 5-75 wt % and the colloidal inorganic boehmite particle from 5-50 wt%, thus because the parts recited equate to 100 (weight percentage is based off total of 100), the weight percentage range recited in the prior art is within

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the claimed range. See col. 14, lines 40-46. A substrate is laminated to the microporous film at col. 2, lines 25-39 and col. 3, lines 18-23 (claim 24). Romano teaches a microparticle coating further comprising well known additives of claims 22 and 23 such as a plasticizer and surfactants such as non-ionic, cationic, or fluorocarbon surfactants at col. 2, line 46 and col. 8, lines 59-61. Romano adds polypropylene at col. 4, line 12 (claim 21). Thus, claims 15-19, 21-24 and 34-35 are met.

While Romano teaches a crosslinked polymethyl methacrylate (col. 8, line 55), Romano does not explicitly teach it contains a crosslinking agent.

Laney teaches a crosslinking agent such as divinylbenzene or diallyl fumarate used in crosslinked PMMA excellent in ink-receiving properties (col. 1, lines 1-10, col. 4, line 30 through col. 5, line 18).

It would have been obvious to one having ordinary skill in the art to have modified the ink receiving media of Romano to include a crosslinking agent because Laney teaches a crosslinking agent used in crosslinked polymethyl methacrylate yields excellent ink-receiving properties (col. 1, lines 1-10, col. 4, line 30 through col. 5, line 18).

### ***Response to Arguments***

Applicant's arguments filed 09-27-06 have been fully considered but they are not persuasive.

Applicant arguments toward amounts remaining of catalyst or crosslinking agents, copolymerization techniques are acknowledged, however, none of these arguments are

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limitations in the instant claims. Thus, the Examiner is not convinced that the crosslinked PMMA of Romano will be destroyed by using the crosslinked PMMA and crosslinking agent of Laney. See Laney's teaching from col. 4, line 30 through col. 5, line 18 showing the option of methyl methacrylate groups in addition to polystyrene argued by Applicant that is crosslinked with various agents besides divinylbenzene at col. 5, lines 5-18.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., amount of crosslinking agent, copolymerization or chemistry techniques or processes, catalyst remaining) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant also argues the crosslinked PMMA including a crosslinking agent provided by the prior art would destroy its crosslinking function by the combination. The Applicant has not made a convincing argument because Romano explicitly teaches crosslinked PMMA and Laney teaches it uses an agent for crosslinking and the end product is past tense, hence "crosslinked". The combination would not be inoperable because while the combination may have a different result, the Applicant has not shown it won't work at all. It is unnecessary, however, that inventions of references be physically combinable to render obvious an applicant's invention. *In re Sneed*, 710 F.2d 1544, 1550, 218. The test for obviousness is not whether the features of a reference may be bodily incorporated into the structure of another reference, but what the combined teachings of those references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425, 208.

A *prima facie* case has been established, and therefore the burden shifts to the Applicant to submit additional objective evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. Arguments of counsel cannot take the place of factually supported objective evidence. See, e.g., *In re Huang*, 100 F.3d 135,139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996); *In re De Blauwe*, 736 F.2d 699,705, 222 USPQ 191, 196 (Fed. Cir. 1984). Until the Applicant has convincingly argued or has provided evidence to the contrary, the rejections are maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tamra L. Dicus  
Examiner  
Art Unit 1774

Nov. 28, 2006



RENA DYE  
SUPERVISORY PATENT EXAMINER

AU 1774 12/06/06